Application No. 09/842,370
Filed: April 25, 2001
TC Art Unit: 2172
Confirmation No.: 6576

REMARKS

The instant Remarks are filed in response to the official action dated June 17, 2004. Reconsideration is respectfully requested.

The status of the claims is as follows:

Claims 1-33 are currently pending.

Claims 1-33 stand rejected.

The Examiner has rejected claims 1-3, 11, 15-22, and 30 under 35 U.S.C. 103(a) as being unpatentable over Lambson *et al.* (*Automated Reticle Transport and Stepper Loading*, Solid State Technology, vol. 39, no. 10, p. 97, October 1996) in view of Burdick *et al.* (USP 6,148,307). Specifically, the official action indicates that the Lambson reference discloses an apparatus for managing data corresponding to a plurality of reticles in a semiconductor manufacturing system including a stocker including a stocker database and a stocker controller, in which the stocker controller is configured to store data corresponding to at least one of the plurality of reticles stored within a plurality of storage locations within the stocker database. The official action further indicates that the Lambson reference does not disclose a central reticle database for storing data associated with the plurality of reticles, and a reticle management

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controller for manipulating and maintaining the plurality of reticles based on one or more portions of data associated with more than one of the plurality of reticles. The official action goes on to indicate that the Burdick reference discloses a central reticle database (a "global database"; see column 3, lines 20-27, of Burdick *et al.*), and that it would have been obvious to one of ordinary skill in the art at the time of the invention to provide a central reticle database in the system of Lambson to standardize the data format in the stocker database and to store data in the central database for easy access and retrieval.

The Applicants respectfully submit, however, that the official action failed to consider all of the limitations of base claim 1, and therefore the rejections of the claims under section 103 of the Patent Laws are unwarranted and should be withdrawn. Specifically, the official action failed to consider fully the limitations of the central reticle database for storing data associated with the plurality of reticles, and the reticle management controller for storing data in the central reticle database, for retrieving data from the central reticle database, and *for manipulating and maintaining the plurality of reticles based on second data associated with more than one of the plurality of reticles*, as recited in base claim 1.

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As indicated above, the Burdick reference discloses a "global database" (see, *e.g.*, column 3, lines 20-23, of Burdick *et al.*). The Applicants respectfully submit, however, that the global database of Burdick *et al.* is not suggestive of the central reticle database, as recited in base claim 1. Instead of being suggestive of a centralized database such as the central reticle database of claim 1, the global database of Burdick *et al.* merely represents a database system composed of various distributed elements connected together by a common network (see column 4, lines 3-6, of Burdick *et al.*). For example, the global database of Burdick *et al.* includes a local database server **105** for a particular client location, and a database server **107** representing all other database servers distributed within the database system (see column 5, lines 42-46, and Fig. 1, of Burdick *et al.*).

In fact, the Burdick reference teaches away from providing a centralized database such as the central reticle database of base claim 1. For example, Burdick *et al.* state that distributing the global database over a number of database servers **105, 107** on a network *provides a number of advantages over centralized databases* (see column 6, lines 22-24, of Burdick *et al.*). In addition, Burdick *et al.* expressly state that their global database is decentralized into a number of database servers **105, 107** (see

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column 6, lines 53-54, of Burdick *et al.*). Clearly, the Burdick reference provides no hint that the global database described therein is a centralized database or operates like a centralized database. The functionality of the global database of Burdick *et al.* clearly is not suggestive of the central reticle database of base claim 1.

As described in the instant application and recited in base claim 1, the central reticle database is configured and arranged to store data associated with a plurality of reticles. Further, a reticle management controller is communicably coupled to the central reticle database for storing data in the central reticle database and for retrieving data from the central reticle database. Moreover, a stocker controller is configured and arranged to store at least a portion of the data corresponding to at least one of the plurality of reticles within a stocker database.

As recited in claim 1, the data associated with the plurality of reticles includes first and second data, portions of the first data being associated with respective ones of the plurality of reticles, and portions of the second data being associated with more than one of the plurality of reticles. Further, the reticle management controller retrieves at least a portion of the first

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and second data stored within the central reticle database and provides the retrieved data portion to the stocker controller, and the stocker controller stores the retrieved data portion within the stocker database. Moreover, the reticle management controller *manipulates and maintains the plurality of reticles based on one or more portions of the second data associated with more than one of the plurality of reticles*.

In contrast, the global database of Burdick *et al.* is used to satisfy client requests for data (see column 6, line 60+, and column 7, lines 1+, 13+, 27+, and 42+, of Burdick *et al.*). Because the global database of Burdick *et al.* is merely used to satisfy client data requests, benefits are derived from configuring the global database as a distributed database, as described throughout the Burdick reference. For example, accessing information from a database located within a local database server within the global distributed database allows information requests to be handled quickly and easily (see column 6, lines 60-67, of Burdick *et al.*).

As described in the instant application and recited in base claim 1, the Applicants' apparatus for managing data corresponding to a plurality of reticles includes the central reticle database and the reticle management controller. Unlike Burdick *et al.*, the

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Applicants' derive significant advantages from their reticle database being centralized. For example, storing both data associated with a corresponding reticle and reticle carrier ("the first data") and system wide data constants ("the second data") in the central database allows easy access and application of the data throughout the semiconductor manufacturing system (see page 6, lines 13-16, of the application). Easy access and application of the system wide data constants ("the second data") to stockers located throughout the manufacturing system is particularly facilitated by the central reticle database of claim 1.

Moreover, whereas the global database of Burdick *et al.* is used merely to satisfy local client data requests and therefore benefits from being configured as a *distributed* database, data stored in the central reticle database of base claim 1 is used by the reticle management controller to maintain and to manipulate the plurality of reticles throughout the semiconductor manufacturing system (see, *e.g.*, page 7, lines 23-26, of the application). Because the stored data is usable in processing stages throughout the manufacturing system, benefits of the Applicants' claimed apparatus are derived from configuring the reticle database as a *centralized* database.

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Because the official action failed to consider the subject matter of base claim 1 "as a whole" by fully considering the limitations of the central reticle database for storing data associated with the plurality of reticles, and the reticle management controller for storing data in the central reticle database, for retrieving data from the central reticle database, and for manipulating and maintaining the plurality of reticles based on second data associated with more than one of the plurality of reticles, and because neither the cited Lambson reference nor the Burdick reference teaches or suggests providing the centralized reticle database and the reticle management controller of claim 1, the Applicants respectfully submit that the suggested combination of the Lambson and Burdick references does not render base claim 1 and the claims dependent therefrom obvious. For at least these same reasons, the Applicants respectfully submit that the suggested combination of the Lambson and Burdick references does not render base claims 16 and 20 and the claims dependent therefrom obvious.

The Applicants further point out that the cited PRI reference ("*PRI Automation Announces New Combination Reticle Stocker*", PR Newswire, p. 9143, October 26, 1999) does not cure the deficiencies of the Lambson and Burdick references, and therefore

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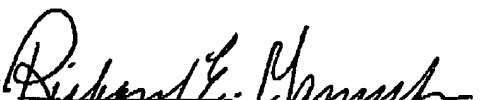
the Lambson, Burdick, and PRI references taken alone or in combination do not render base claims 1, 16, and 20 and the claims dependent therefrom obvious. Accordingly, the Applicants respectfully submit that the rejections of claims 1-33 under 35 U.S.C. 103 are unwarranted and should be withdrawn.

In view of the foregoing, it is respectfully submitted that the present application is in a condition for allowance. Early and favorable action is respectfully requested.

The Examiner is encouraged to telephone the undersigned Attorney to discuss any matter that would expedite allowance of the present application.

Respectfully submitted,

OREN WIESLER ET AL.

By 
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